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Cory-Ann Wind
Clean Fuels Program
Oregon Department of Environmental Quality
OregonCleanFuels@deq.oregon.gov



Comments on Proposed Forklift Estimation Methodology

Papé Material Handling is one of the largest electric forklift dealers and rental fleets on the West Coast. Our team has extensive expertise in building a forklift fleet that meets each specific customer's requirements, from small operations to round-the-clock facilities. Our expertise includes in sizing batteries appropriately for each customer's needs and to the forklift specifications.

Based on our expertise and knowledge of a range of battery specifications, we find that the DEQ's proposed Forklift Estimation Methodology changes do not reflect how forklift battery capacities are designed and utilized.

The DEQ referenced battery sizing tools, such as Enersys; these tools typically make the assumption that batteries will be utilized to their designed specifications. These specifications (referenced below) are for a depth of discharge of 80% for Lead Acid batteries or 90%+ for lithium ion batteries. This again reinforces the manufacturers assumption that a battery will regularly be used to this level of discharge to perform the work required in a shift.

Most businesses, with assistance from their forklift dealer, select their lift and battery based on these operational assumption in order to maximize their investment. Purchasing a battery or forklift with unneeded additional capacity is wasteful from a financial perspective and something businesses aim to avoid.

Lithium Ion technology has improved the ability to offer a wider range of battery capacity increments as well as an increased usable depth of discharge (see below). This has been a key component for a Lithium battery, because you are able to purchase a smaller Amp-Hour battery with a deeper depth of discharge (listed below). This means that many fleets now have very specific battery capacities that are intended to be near to fully discharged in a shift.

In practical applications, most operations will discharge to 80% per shift for lead acid batteries or 90% per shift for Lithium batteries.

Requiring the assumption that no more than 20% depth of discharge for every forklift participating in the program is unreasonable based on typical industry battery design practices and decreases the accuracy of the proposed Estimation Methodology. Papé Material Handling strongly recommends the DEQ keep the depth of discharge as a variable that can be estimated by each fleet, based on their operations.

Thank you

Brett Talbott

Brett Talbott
Oregon Motive Power Regional Manager
Pape Material Handling